UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,312	11/28/2003	Kan Yan	Inno-023	1433

29956 7590 05/15/2007

TIMOTHY P. O'HAGAN
8710 KILKENNY CT
FORT MYERS, FL 33912

EXAMINER	
HAILU, KIBROM T	
ART UNIT	PAPER NUMBER
2616	
MAIL DATE	DELIVERY MODE
05/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/724,312	YAN ET AL.	
	Examiner	Art Unit	
	Kibrom T. Hailu	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Xie (US Pub. 2004/0059942 A1).

Regarding claim 1, Xie discloses gateway for exchanging IP frames with remote IP devices over a communication link to a frame switched network (abstract; fig. 5A, "firewall or security gateway"), the gateway comprising: a wide area network interface (external interface) coupled to the communication link for exchanging the IP frames with the remote IP devices (Fig. 5A and 5B; paragraph [0004], lines 11-15, 25-28, illustrate that the gateway comprises external interface connects or interfaces to the public or internet network to send/receive packets); a local area network interface (internal interface) for receiving outbound IP frames from each of a plurality of IP clients (Fig. 5A and 5B; paragraph [0004], lines 11-15, 25-28, illustrate that the gateway comprises internal interface connected or interfaces to the internal or private network to receive/send packets), each outbound IP frame comprising a local IP header and payload (paragraph [0004], lines 28-31, it is also well known in the art that an IP packet or frame to have IP header and payload): the IP header comprising: an IP client socket comprising a client IP address and a client port number of the IP client (Fig. 5E-5K; paragraphs [0004], lines 28-31;

[0005]-[0009], the header comprises an address, IP source, and source port number); and a destination socket comprising a remote device IP address and a port number of a remote IP device (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP destination, and destination port number); and a router module coupled between the local area network interface and the wide area network interface, the router module receiving each outbound IP frame from the local area network interface and providing a corresponding translated outbound IP frame to the wide area network interface (paragraph [0004], lines 15-22, explains the firewall translates the outgoing packet's header from the internal network to the public or external network); the translated outbound IP frame comprising a translated IP client socket comprising a gateway IP address and a global port number of the gateway that uniquely associates with the IP client socket (paragraph [0010]-[0013], the translated outgoing packet's header comprises the firewall's IP address and port number); and: the payload if the outbound IP frame is a data frame (paragraphs [0032], lines 4-6; [0059], lines 26-28; [0004], lines 15-19; [0030], lines 7-11, illustrate if the packet is not VoIP, the firewall changes or translates only the header's address and port number. That is, the firewall doesn't make any change or translation to the user data); translated payload if the outbound IP frame is a media session signaling frame (paragraphs [0021], lines 3-13; [0022], lines 3-16; [0032], lines 6-16; [0061]; [0063]; [0074]; [0076], illustrate when the packet VoIP or signaling and media, the translator at the firewall or gateway performs message body or payload address translation. Note that the packet is VoIP, the address and port information is embedded in the message body or payload of the packet rather than rely on the packet header for routing, see paragraph [0059], lines 21-26).

Regarding claim 2, Xie discloses a media session signaling fame comprises at least one of: a media session socket (media data transmission) comprising the client IP address and a media port number of the IP client (paragraph [0076], lines 1-2, 8-10); and a signaling contact socket comprising the client IP address and a signaling port number (paragraphs [0061], lines 9-11) and the translated payload comprises: a translated media session socket if the media session signaling frame includes a media session socket, the translated media session socket comprising the gateway IP address and a translated media port number that uniquely associated with the media session socket (paragraph [0077]); and a translated signaling contact socket if the media session signaling frame includes a signaling contact socket, the translated signaling contact socket comprising the gateway IP address and a translated signaling port number that uniquely associated with the signaling contact socket (paragraphs [0061], lines 6-11; [0062]-[0063]).

Regarding claim 3, Xie discloses the router module further comprises a translation table for recording: the global port number in unique association with the IP client socket (paragraph [0068]); the translated media port number in unique association with the media session socket (paragraphs [0077]; [0032], lines 6-10); and the translated signaling port number in unique association with the signaling contact socket (paragraphs [0061], lines 6-11; [0032], lines 6-10).

Regarding claim 4, Xie discloses the router module comprises a frame handling module for comparing the payload of the outbound IP frame to a plurality of signaling frame pattern and determining that the outbound IP frame is a media session signaling frame if the payload matches a signaling frame pattern (Fig. 2, step 120 and 3, step 205; paragraph [0032], lines 3-10; [0030], lines 12-14, since the gateway checks a payload of a packet to see whether the received

packet is regular or VoIP, it is obvious to realize the existence of a module in the gateway that compares the plurality of the packets to determine the its type).

Regarding claim 5, Xie discloses a gateway comprising: a payload translation database (mapping table) for storing each signaling frame pattern in association with translation instructions; and a payload translation module (for example, FortiGate) for translating each socket of the payload that is identified for translation in the translation instructions (paragraph [0081], the FortiGate uses the mapping table as database to translate the signaling or VoIP packets. Note also that storing the incoming and/or outgoing VoIP frame patterns is obvious since Xie teaches all the received frames at the gateway are compared with the look at table to identify the packet type, see paragraph [0032], lines 3-10).

Regarding claim 6, Xie discloses a gateway for exchanging IP frames with remote IP devices over a communication link to a frame switched network (abstract; fig. 5A, "firewall or security gateway"), the gateway comprising: a wide area network interface (external interface) coupled to the communication link for exchanging the IP frames with the remote IP devices (Fig. 5A and 5B; paragraph [0004], lines 11-15, 25-28, illustrate that the gateway comprises external interface connects or interfaces to the public or internet network to send/receive packets); a local area network interface (internal interface) for receiving outbound IP frames from each of a plurality of IP clients (Fig. 5A and 5B; paragraph [0004], lines 11-15, 25-28, illustrate that the gateway comprises internal interface connected or interfaces to the internal or private network to receive/send packets), each outbound IP frame comprising a local IP header and payload (paragraph [0004], lines 28-31, it is also well known in the art that an IP packet or frame to have IP header and payload): the IP header comprising: an IP client socket comprising a client IP

address and a client port number of the IP client (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP source, and source port number); and a destination socket comprising a remote device IP address and a port number of a remote IP device (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP destination, and destination port number); and the payload comprising: a media session socket comprising the client IP address and a media port number of the IP client (paragraphs [0059], lines 11-15; [0061], lines 6-11, illustrating the message body or the payload comprises source IP address and source port); a router module coupled between the local area network interface and the wide area network interface, the router module receiving each outbound IP frame from the local area network interface and providing a corresponding translated outbound IP frame to the wide area network interface (paragraph [0004], lines 15-22, explains the firewall translates the outgoing packet's header from the internal network to the public or external network), the translated outbound IP frame comprising both a global IP header and translated payload: the global IP global header comprising a translated IP client socket comprising a gateway IP address and a global port number of the gateway that uniquely associates with the IP client socket (paragraph [0010]-[0013], the translated outgoing packet's header comprises the firewall's IP address and port number); the translated payload comprising a translated media session socket comprising the gateway IP address and a translated media port number that uniquely associates with the media session socket (paragraphs [0021], lines 3-13; [0022], lines 3-16; [0032], lines 6-16; [0061]; [0063]; [0074]; [0076], explain the VoIP payload's address and port is translated to firewall or gateway address and port); and the router module comprising a translation table for recording both: the IP client socket in association with the

global port number (paragraph [0068]); and the media session socket in association with the global media port number (Fig. 5E-5K; paragraphs [0077]; [0032], lines 6-10; [0039], lines 6-13; [0040]; [0032], lines 6-10).

Regarding claim 7, Xie discloses a gateway for exchanging IP frames with remote IP devices over a communication link to a frame switched network (abstract; fig. 5A, "firewall or security gateway"), the gateway comprising: a wide area network interface (external interface) coupled to the communication link for exchanging the IP frames with the remote IP devices (Fig. 5A and 5B; paragraph [0004], lines 11-15, 25-28, illustrate that the gateway comprises external interface connects or interfaces to the public or internet network to send/receive packets); a local area network interface (internal interface) for receiving outbound IP frames from each of a plurality of IP clients (Fig. 5A and 5B; paragraph [0004], lines 11-15, 25-28, illustrate that the gateway comprises internal interface connected or interfaces to the internal or private network to receive/send packets), each outbound IP frame comprising an IP header and payload (paragraph [0004], lines 28-31, it is also well known in the art that an IP packet or frame to have IP header and payload), the local IP header comprising: an IP client socket comprising a client IP address and a client port number of the IP client(Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP source, and source port number); and a destination socket comprising a remote device IP address and a port number of a remote IP device (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP destination, and destination port number); a router module coupled between the local area network interface and the wide area network interface, the router module receiving each outbound IP frame from the local area network interface and providing a corresponding

translated outbound IP frame to the wide area network interface (paragraph [0004], lines 15-22, explains the firewall translates the outgoing packet's header from the internal network to the public or external network), the router module comprising: an IP layer translation module for: generating the translated outbound IP frame in response to receiving an outbound IP frame (paragraph [0077], lines 3-5), the translated outbound IP frame comprising a global IP header and payload, the global IP global header comprising: a translated IP client socket comprising a gateway IP address and a global port number of the gateway that uniquely associates with the IP client socket (Fig. 5J; paragraphs [0010]-[0015]; [0061], lines 6-11, the outgoing packet's header and message body or payload is changed into routable gateway header and payload by translating the header's and payload's addresses and ports); and the destination socket; and recording the IP client socket in association with the global port number in a translation table (Fig. 5E-5K); an application layer translation module for: generating translated payload in response to detecting that the outbound IP frame comprises at least one of a media session socket and a signaling contact socket (paragraph [0076], lines 1-2, 8-10; [0061], lines 9-11), the translated payload comprising: a translated media session socket if the media session signaling frame includes a media session socket, the translated media session socket comprising the gateway IP address and a translated media port number that uniquely associated with the media session socket(paragraph [0077]); and a translated signaling contact socket if the media session signaling frame includes a signaling contact socket, the translated signaling contact socket comprising the gateway IP address and a translated signaling port number that uniquely associated with the signaling contact socket (paragraphs [0061], lines 6-11 ; [0062]-[0063]).

Regarding claim 8, Xie discloses the routing module further comprises a frame handling module for passing the outbound IP frame with the payload to the IP layer translation module in response to determining that the outbound IP frame is a data frame (paragraphs [0030], lines 7-12; [0032], lines 3-6, if the packet is a regular packet, not VoIP packet, the payload passes to the intended destination without any change. But obviously, the gateway translates the address and port number of the header).

Regarding claim 9, Xie discloses the frame handling module compares the payload of the outbound IP frame to a plurality of signaling frame pattern to determine that the outbound IP frame is a media session signaling frame if the payload matches a signaling frame pattern (Fig. 2, step 120 and 3, step 205; paragraphs [0032], lines 3-10; [0030], lines 12-14, , since the gateway checks a payload of a packet to see whether the received packet is regular or VoIP, it is obvious to realize the existence of a module in the gateway that compares the plurality of the packets to determine the its type).

Regarding claim 10, Xie discloses the routing module further comprises a translation table and the application layer translation module further provides for recording, in the translation table (Fig. 5E-5K) each of: the global port number in unique association with the IP client socket (paragraphs [0013]; [0030], lines 7-12); the translated media port number in unique association with the media session socket (paragraphs [0077]; [0032], lines 6-10); and the translated signaling port number in unique association with the signaling contact socket (paragraphs [0061], lines 6-11; [0032], lines 6-10).

Regarding claim 11, Xie discloses a method of operating a gateway that supports multiple IP clients to effect the exchange of IP frames between a plurality of IP clients and

remote IP devices over a communication link to a frame switched network (abstract; fig. 5A, "firewall or security gateway"), the method comprising: receiving an outbound IP frame from each of a plurality of IP clients (Fig. 5A and 5B; paragraph [0004], lines 11-15, 25-31, illustrate that the gateway comprises internal interface connected or interfaces to the internal or private network to receive packets), each outbound IP frame comprising a local IP header and payload (paragraph [0004], lines 28-31, it is also well known in the art that an IP packet or frame to have IP header and payload): the local IP header comprising: an IP client socket comprising a client IP address and a client port number of the IP client (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP source, and source port number); and a destination socket comprising a remote device IP address and a port number of a remote IP device (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP destination, and destination port number); and providing a corresponding translated outbound IP frame to the wide area network interface (Fig. 5A and 5B; paragraph [0004], lines 11-19, illustrate that the gateway comprises external interface connects or interfaces to the public or internet network to receive translated packets), the translated outbound IP frame comprising a translated IP client socket comprising a gateway IP address and a global port number of the gateway that uniquely associates with the IP client socket (Fig. 5A and 5B; paragraphs [0004], lines 11-19; [0010]-[0015], illustrate that the gateway comprises external interface connects or interfaces to the public or internet network to receive translated packets, and the translated packets include gateway IP addresses and port numbers associated with the particular sender) and: the payload if the outbound IP frame is a data frame (paragraphs [0032], lines 4-6; [0059], lines 26-28; [0004], lines 15-19; [0030], lines 7-11, illustrate if the packet is not VoIP, the

firewall changes or translates only the header's address and port number. That is, the firewall doesn't make any change or translation to the user data); and translated payload if the outbound IP frame is a media session signaling frame (paragraphs [0021], lines 3-13; [0022], lines 3-16; [0032], lines 6-16; [0061]; [0063]; [0074]; [0076], explain when the packet VoIP or signaling and media, the translator at the firewall or gateway performs message body or payload address translation. Note that the packet is VoIP, the address and port information is embedded in the message body or payload of the packet rather than rely on the packet header for routing, see paragraph [0059], lines 21-26).

Regarding claim 12, Xie discloses a media session signaling fame comprises at least one of: a media session socket (media data transmission) comprising the client IP address and a media port number of the IP client (paragraph [0076], lines 1-2, 8-10); and a signaling contact socket comprising the client IP address and a signaling port number (paragraphs [0061], lines 9-11) and the translated payload comprises: a translated media session socket if the media session signaling frame includes a media session socket, the translated media session socket comprising the gateway IP address and a translated media port number that uniquely associated with the media session socket (paragraph [0077]); and a translated signaling contact socket if the media session signaling frame includes a signaling contact socket, the translated signaling contact socket comprising the gateway IP address and a translated signaling port number that uniquely associated with the signaling contact socket (paragraphs [0061], lines 6-11; [0062]-[0063]).

Regarding claim 13, Xie discloses comprising recording, in a translation table (Fig. 5E-5K): the global port number in unique association with the IP client socket (paragraphs [0013]; [0030], lines 7-12); the translated media port number in unique association with the media

session socket (paragraphs [0077]; [0032], lines 6-10); and the translated signaling port number in unique association with the signaling contact socket (paragraphs [0061], lines 6-11; [0032], lines 6-10).

Regarding claim 14, Xie discloses comparing the payload of the outbound IP frame to a plurality of signaling frame patterns; and determining that the outbound IP frame is a media session signaling frame if the payload matches a signaling frame pattern (paragraphs [0030], lines 7-12; [0032], lines 3-6, if the packet is a regular packet, not VoIP packet, the payload passes to the intended destination without any change. But obviously, the gateway translates the address and port number of the header).

Regarding claim 15, Xie discloses translating each socket of the payload by identifying translation instructions associated with each signaling frame pattern in a payload translation database (paragraph [0081], the FortiGate uses the mapping table as database to translate the signaling or VoIP packets. Note also that storing the incoming and/or outgoing VoIP frame patterns is obvious since Xie teaches all the received frames at the gateway are compared with the look at table to identify the packet type, see paragraph [0032], lines 3-10).

Regarding claim 16, Xie discloses a method of operating a gateway that supports multiple IP clients to effect the exchange of IP frames between a plurality of IP clients and remote IP devices over a communication link to a frame switched network (abstract; fig. 5A, "firewall or security gateway"), the method comprising: receiving each outbound IP frames from each of a plurality of IP clients (Fig. 5A and 5B; paragraph [0004], lines 11-15, 25-31, illustrate that the gateway comprises internal interface connected or interfaces to the internal or private network to receive packets), each outbound IP frame comprising a local IP header and payload

(paragraph [0004], lines 28-31, it is also well known in the art that an IP packet or frame to have IP header and payload): the IP header comprising: an IP client socket comprising a client IP address and a client port number of the IP client (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP source, and source port number); and a destination socket comprising a remote device IP address and a port number of a remote IP device (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP destination, and destination port number); and the payload comprising: a media session socket comprising the client IP address and a media port number of the IP client (paragraphs [0059], lines 11-15; [0061], lines 6-11, illustrating the message body or the payload comprises source IP address and source port); providing a corresponding translated outbound IP frame to the wide area network interface (Fig. 5A and 5B; paragraph [0004], lines 11-19, illustrate that the gateway comprises external interface connects or interfaces to the public or internet network to receive translated packets), the translated outbound IP frame comprising both a global IP header and translated payload (Fig. 5A and 5B; paragraphs [0004], lines 11-19; [0010]-[0015]; [0061], lines 6-11, illustrate that the gateway comprises external interface connects or interfaces to the public or internet network to receive translated packets, and the translated packets include gateway IP addresses and port numbers of header, and translated message body or payload associated with the particular sender): the global IP global header comprising a translated IP client socket comprising a gateway IP address and a global port number of the gateway that uniquely associates with the IP client socket (paragraph [0010]-[0013], the translated outgoing packet's header comprises the firewall's IP address and port number); the translated payload comprising a translated media session socket comprising the

gateway IP address and a translated media port number that uniquely associates with the media session socket (paragraphs [0021], lines 3-13; [0022], lines 3-16; [0032], lines 6-16; [0061]; [0063]; [0074]; [0076], explain the VoIP payload's address and port is translated to firewall or gateway address and port); and recording, in a translation table (Fig. 5E-5K), both: the IP client socket in association with the global port number (paragraphs [0077]; [0032], lines 6-10); and the media session socket in association with the global media port number (paragraphs [0077]; [0032], lines 6-10).

Regarding claim 17, Xie discloses a method of operating a gateway that supports multiple IP clients to effect the exchange of IP frames between a plurality of IP clients and remote IP devices over a communication link to a frame switched network (abstract; fig. 5A, "firewall or security gateway"), the method comprising: receiving each outbound IP frames from each of a plurality of IP clients (Fig. 5A and 5B; paragraph [0004], lines 11-15, 25-31, illustrate that the gateway comprises internal interface connected or interfaces to the internal or private network to receive packets from plurality of clients), each outbound IP frame comprising an IP header and payload (paragraph [0004], lines 28-31, it is also well known in the art that an IP packet or frame to have IP header and payload), the local IP header comprising: an IP client socket comprising a client IP address and a client port number of the IP client (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP source, and source port number); and a destination socket comprising a remote device IP address and a port number of a remote IP device (Fig. 5E-5K; paragraphs [0004], lines 28-31; [0005]-[0009], the header comprises an address, IP destination, and destination port number); providing a corresponding translated outbound IP frame to the wide area network interface (Fig. 5A and 5B;

paragraph [0004], lines 11-19, illustrate that the gateway comprises external interface connects or interfaces to the public or internet network to receive translated packets) by a process of: generating the translated outbound IP frame in response to receiving an outbound IP frame (paragraph [0077], lines 3-5), the translated outbound IP frame comprising a global IP header and payload, the global IP global header comprising: a translated IP client socket comprising a gateway IP address and a global port number of the gateway that uniquely associates with the IP client socket (Fig. 5J; paragraphs [0010]-[0015]; [0061], lines 6-11, the outgoing packet's header and message body or payload is changed into or generating routable gateway header and payload by translating the header's and payload's addresses and ports); and the destination socket; and generating translated payload in response to detecting that the outbound IP frame comprises at least one of a media session socket (paragraph [0076], lines 1-2, 8-10) and a signaling contact socket (paragraphs [0061], lines 9-11), the translated payload comprising: a translated media session socket if the media session signaling frame includes a media session socket, the translated media session socket comprising the gateway IP address and a translated media port number that uniquely associated with the media session socket (paragraph [0077]); and a translated signaling contact socket if the media session signaling frame includes a signaling contact socket, the translated signaling contact socket comprising the gateway IP address and a translated signaling port number that uniquely associated with the signaling contact socket (paragraphs [0061], lines 6-11; [0062]-[0063]).

Regarding claim 18, Xie discloses generating the translated IP frame with the payload in response to determining that the outbound IP frame is a data frame (paragraphs [0032], lines 4-6; [0059], lines 26-28; [0004], lines 15-19; [0030], lines 7-11, illustrate if the packet is not VoIP,

the firewall changes or translates only the header's address and port number without translating the payload to generate an outgoing packet with a header having gateway's address and port number. That is, the firewall doesn't make any change or translation to the user data).

Regarding claim 19, Xie discloses a step of determining whether the outbound IP frame is a media session signaling frame comprises comparing the payload of the outbound IP frame to a plurality of signaling frame pattern and determining that the outbound IP frame is a media session signaling frame if the payload matches a signaling frame pattern (Fig. 2, step 120 and 3, step 205; paragraph [0032], lines 3-10; [0030], lines 12-14, since the gateway checks a payload of a packet to see whether the received packet is regular or VoIP, it is obvious to realize the existence of a module in the gateway that compares the plurality of the packets to determine the its type).

Regarding claim 20, Xie discloses recording, in a translation table (Fig. 5E-5K) each of: the global port number in unique association with the IP client socket (paragraph [0068]); the translated media port number in unique association with the media session socket (paragraphs [0077]; [0032], lines 6-10); and the translated signaling port number in unique association with the signaling contact socket (paragraphs [0061], lines 6-11; [0032], lines 6-10).

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kibrom T. Hailu whose telephone number is (571)270-1209. The examiner can normally be reached on Monday-Thursday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kibrom Hailu
KH 05/10/07

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER